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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,320	09/30/2003	Nobuaki Miyake	027260-676	2264
21839	7590	07/03/2006	EXAMINER	
BUCHANAN INGERSOLL PC (INCLUDING BURNS, DOANE, SWECKER & MATHIS) POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			CAZAN, LIVIUS RADU	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,320

Applicant(s)

MIYAKE ET AL.

Examiner

Livius R. Cazan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 6/9/2006 has been fully considered and made of record. The rejection under 35 U.S.C. 112, second paragraph, has been overcome. Cancellation of claims 5 and 6 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4 and 7-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4 and 7-10 are a method for manufacturing a stator. However, the claims do not positively recite all the steps for manufacturing, making, or forming the stator. For example, in claim 1, "a first core member formed by stacking ... bent portion" (lines 5-7) should read --forming a first core member by stacking ... connecting a plurality of yoke members through a bendable bent portion-- or something similar. Likewise, a positive step should be recited for the formation of the second core member by stacking, connecting, shifting etc. as well as the third and fourth core members. The same applies for claim 7, i.e. the steps of manufacturing the various core members must be positively recited.

Further, the phrases "the next stage" (claim 1, line 25), "the same number of stages" (claim 1, lines 27 and 28), and "the prescribed number of stages" (claim 1, line

Art Unit: 3729

28 and 29) lack proper antecedent basis. It is unclear what stages are being discussed. Likewise in claim 7, lines 21 and 23-25.

In claim 11, the phrase “the other stator core” (lines 8 and 9), renders the claim indefinite, since, as claimed, it would appear the recited plurality consists of only two cores. However, it is unclear that this is so, and, the recited plurality of stator cores (line 3) would imply that this number is not limited to only two cores. In such an instance, if say there are three cores, it is then unclear which “other stator core” is intended.

Also, the following informalities should be addressed:

In claim 1, lines 13-15, “with left the same ... prescribed number of stages” should read --with the same number of stages of one end of said second core member left unconnected as the prescribed number of stages-- or a similar phrase. Likewise in claim 1, lines 27-29, and claim 7, lines 23-25.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being anticipated by Nakahara et al. (US5859486; hereinafter “Nakahara”).

Regarding claims 11 and 13, Nakahara discloses:

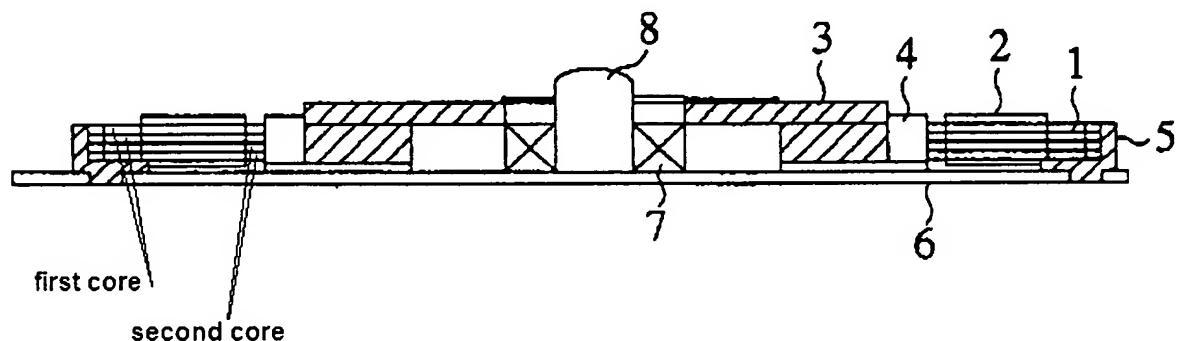
- forming a stacked stator (20 in Fig. 6) core including
 - a plurality of stator cores (a first and second core, see image below; also see Fig. 2), each of which is made up of a prescribed number of stacked sheet magnetic materials (the first core comprises the

top half of the stack of laminated sheets; the second core comprises the bottom half)

- a plurality of yoke members forming each stator core (see the seven yoke members, each having three teeth, Fig. 6)
 - a bendable bent portion provided between said yoke members (see thin portions 10 in Fig. 6)
 - an interconnecting portion for interconnecting the plurality of stator cores by connecting the upper end of one stator core to the lower end of another stator core with a difference in level being provided between the plurality of stator cores; the region between the first core and the second core, such that the top of the second core is connected to the bottom of the first core, and a difference in level exists, since the first core is above the second core
- unfolding the stacked stator core straight (Fig. 6 shows a stacked stator core that is unfolded straight);
 - subjecting the straight stacked stator core to a prescribed treatment (insulation processing by coating; see col. 20, Ins. 50-56);
 - winding a wire around teeth of the straight stacked stator core (coils are formed on the magnetic pole teeth; see Fig. 7; see col. 20, Ins. 53-56) subjected to the prescribed treatment;

- winding up the straight wire-wound stacked stator core to restore the core to its original arrangement in a ring (col. 20, lns. 57-59; see finished stator in Fig. 1) such that the wire-wound side faces the inside of the core.

Note that Nakahara does not disclose unfolding a folded stator core. Instead the core in its unfolded state is discussed. However, the core disclosed by Nakahara is perfectly capable of being folded, and then later unfolded.



Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahara in view of Nakamura et al. (US5451306; hereinafter "Nakamura").

Nakahara discloses the same invention as the applicant, except for coating the stator core with by using electro-coating.

Art Unit: 3729

Nakamura teaches applying a thin insulating film to a stator core by electrodeposition (same as electrocoating) in order to cover burrs on the core surface (see col. 7, Ins. 35-45 and col. 8, Ins. 25-45).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to effect the coating step of Nakahara by electrodeposition, as taught by Nakamura, in order to provide an insulating film which covers rough burrs on the surface of the core.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahara in view of Widstrand (US3783318).

Nakahara discloses the same invention as the applicant, except for winding the stator core into a ring such that the wire-wound side faces the outside of the core. Stators having teeth pointing radially outwardly are known in the art, and Nakahara shows such a stator in Fig. 25.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to form stator cores that when wound into a ring have the wire-wound side facing the outside of the core since this type of rotor is known, and Applicant's method can be applied equally well to stators having the wire winding on the outside of the stator core as to stators having the wire winding on the inside of the stator core. Further, the Applicant has not stated that applying the method of the present specification to cores with outside windings provides an advantage over applying the method to cores with inside windings, which is further

Art Unit: 3729

evidenced by the fact that the Applicant is claiming both embodiments (claims 13 and 14).

Therefore, it would have been prima facie obvious to apply the method of Nakahara to cores having outside windings to obtain the invention as specified in claim 14 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Nakahara.

Allowable Subject Matter

9. Claims 1-4 and 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

10. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3729

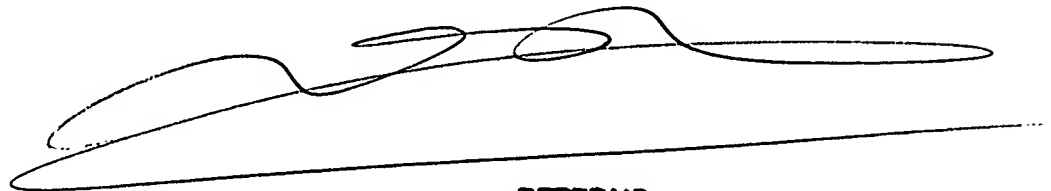
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Livius R. Cazan whose telephone number is (571) 272-8032. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571)272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LRC 06/27/2006

A handwritten signature in black ink, appearing to read 'Peter Vo', with a long horizontal line extending to the right.

**PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700**